

**REMARKS**

Applicant wishes to thank the Examiner for indicating that claims 7, 9, 13 and 24 would be allowable if rewritten in independent form and for indicating that claims 26 and 28 are presently allowable.

**The Section 103 Rejections Based on Habel et al.**

Claims 1, 3, 4, 15, 20-22 and 25 were rejected under 35 U.S.C. §103(a) as being anticipated by Habel et al., U.S. Patent No. 6,592,273 ("Habel"). Applicant respectfully disagrees and traverses these rejections for at least the following reasons.

Each of claims 1, 3, 4, 15, 20-22 and 25 include the feature of generating at least one operating parameter carrier having a frequency value *in a vicinity of a null*. In contrast, the frequency  $f_{ch}$  disclosed in Habel is located at a null. Placing a carrier at a null causes significant interference with an RZ formatted data, which is why Habel is not applicable to RZ data. Habel recognizes this. In contrast, the present invention requires that the carrier be placed in a vicinity of a null in order to make it possible to use RZ and NRZ data. Accordingly, because Habel does not disclose each and every feature of the present invention, Habel cannot anticipate the subject matter of claims 1, 3, 4, 15, 20-22 and 25. Applicant requests reconsideration, withdrawal of the pending rejections and allowance of claims 1, 3, 4, 15, 20-22 and 25.

**The Section 103 Rejections Based on Habel and Bruene**

Claims 2, 5, 6, 8, 12, 16, 17, 23, 27 and 29 were rejected under 35 U.S.C. §103(a) as being unpatentable over Habel in view of Bruene, U.S. Patent No. 4,302,844 ("Bruene"). Applicant respectfully disagrees and traverses these rejections for at least the following reasons.

With respect to claims 2, 5, 6 and 8, Applicant notes that these claims depend on independent claim 1 and are therefore patentable over the combination of Habel and Bruene for the reasons stated above with respect to claim 1 and for the additional reason that Bruene does not overcome the deficiencies of Habel discussed above.

With respect to claims 12, 16, 17, 23, 27 and 29, each of these claims requires, among other things, one or more sinusoidal operating parameter carriers. Neither Habel nor Bruene discloses such an operating parameter carrier.

Contrary to the statement made by the Examiner on page 3 of the Final Office Action (last two lines), Habel's carrier,  $f_{ch}$ , is not a sinusoid. In the Final Office Action, the Examiner directs the Applicant's attention to Figure 1 where there is shown a carrier  $f_{ch}$  20 located at a null. Though the location of the carrier is shown, the type of signal, e.g., sinusoidal, of the carrier is not shown.

In fact, a close reading of Habel results in the conclusion that the carrier frequency,  $f_{ch}$ , is in fact a square wave not a sinusoidal wave.

For example, Habel describes the operating carrier  $f_{ch}$  as being generated by a clock circuit 7 (see Figure 1 and column 3, lines 35-40). Clock circuits generate square waves, not sinusoidal waves, as required by claims 12, 16, 23, 27 and 29.

Accordingly, because neither Habel nor Bruene discloses or suggests the generation of sinusoidal operating parameter carriers (and, in fact, Habel teaches away from such a carrier), the combination suggested by the Examiner cannot suggest the subject matter required by claims 2, 5, 6, 8, 12, 16, 17, 23, 27 and 29.

Applicant respectfully requests withdrawal of the pending rejections and allowance of claims 2, 5, 6, 8, 12, 16, 17, 23, 27 and 29.

**The Section 103 Rejections Based on Habel and Davarian**

Claims 10, 11, 14, 18 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Habel in view of Davarian, U.S. Patent No. 4,675,880 ("Davarian"). Applicant respectfully disagrees and traverses these rejections for at least the following reasons.

Initially, Applicant notes that claims 10, 11, 14, 18 and 19 depend on independent claims 1, 12 or 15 and are therefore patentable over the combination of Habel and Davarian for the reasons set forth above regarding those claims and for the additional reason that Davarian does not make up for the deficiencies of Habel and/or Bruene discussed above.

In addition, as Applicant has stated in previous responses, Davarian does not disclose the generation of an operating parameter carrier. Rather, Davarian relates to a calibration pilot tone. Therefore, Applicant respectfully submits that one of ordinary skill in the art would not be motivated to combine Habel and Davarian because to do so would require Habel to change its principle of operation in order to generate a calibration pilot tone or require Davarian to change its principle of operation to generate an operating parameter carrier. Neither is permissible (see MPEP 2143.01).

Accordingly, Applicant respectfully requests withdrawal of the pending rejections and allowance of claims 10, 11, 14, 18 and 19.

**Entry of Amendment After Final Rejection**

Entry of the Amendment is requested under 37 U.S.C. §1.116 because the Amendment: (a) places the application in condition for allowance for the reasons discussed herein; (b) does not raise any new issues regarding further search and/or considerations (i.e., the amendments to independent claims 15, 27 and 29 are based on pre-existing features from a dependent claim); (c) does not present any additional claims without canceling the corresponding number of finally rejected claims; and (d) places the application in better form for appeal, if an appeal is necessary. Entry of the Amendment is thus respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John E. Curtin at the telephone number of the undersigned below.

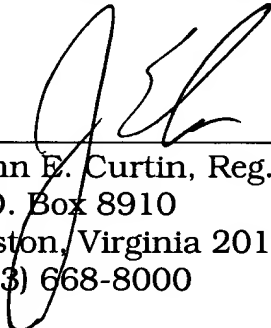
In the event this Response does not place the present application in condition for allowance, Applicant requests the Examiner to contact the undersigned at (703) 668-8000 to schedule a personal interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By

  
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